

REMARKS

Applicant has amended the claims to address the various technical objections of the Examiner including informalities, 35 U.S.C. 112 rejections referred to in paragraphs 2-6. No amendments have been made which are outside the scope of the foregoing rejections.

Claim Rejection Under 35 USC 102(b):

Claim 1 is rejected under 35 U.S.C. 102(b) as anticipated by Hamalainen et al. It is alleged that Hamalainen et al. discloses dividing control information into an in-band portion and an out-of-band portion.

Hamalainen et al. is concerned about using a coding method to increase the efficiency of transferring data through the air. The transfer is carried out in a burst of signal energy. There is no possibility of an out-of-band signal in the wireless context unless one uses a separate frequency band. This is not what Hamalainen describes. Column 1, lines 24 to 27 clearly states that the information elements and control elements are both part of a data frame. That is, they are both completely in-band. Figure 1a further shows user data and control placed into a single burst. Thus, there is no out-of-band portion of the control information.

In the present application, the control signals (combination of in-band and out-of-band) control the flow of information in the data bus as claimed in claim 1. For example, the control signals indicate when a transfer begins and ends and whether the current

transfer is the start of a packet, an intermediate portion or the end of a packet. The Examiner seems to infer that parity control information controls data bus lanes. It would not be obvious to an ordinary person skilled in the art as to how that person could take parity control information for securing the accuracy of the data transmission (Hamalainen, col. 1, line 23 to 24) and to send that parity control information in the control signals to learn about packet segmentation, as in the current application. Official Action paragraph 8b does not take most of the functions of the control signals of the current application into account.

For the present application, out-of-band means having a separate physical control wire and disparate low level interpretation of the signal on wires shared between control and data when that control wire is in a high-level state and a low-level state. The channels in Hamalainen column 8, lines 18 to 19 are logical channels. They are packets sent over the same airwaves, using the same frequency band as with any other packets, including user data packets. No physically separate channel is used. In order for Hamalainen to be similar to the current application, the GSM standard would have to send a control signal over one frequency and control data over another frequency and for the two to be perfectly aligned at each bit time. The applicant, respectfully submits that Office Action Paragraph 8c misinterprets "channels" as being separate physical entities in Hamalainen.

In Hamalainen, data is compressed by removing a portion of it and replacing it with a smaller codeword. Control information (Office Action Paragraph 8d) is necessary

to identify the replacement codeword so that it may be reconstructed. Thus, the transmitted data is not the same as the original information stream. In the current application, the original information stream is not modified. Thus, Hamalainen does not transfer a variable length packet or cell but rather transfers a modified packet or cell different from the original one over the air. Moreover, in Hamalainen a control of data signal is not inserted into the data path to identify when the data path contains control information and when it contains data. The control information in Hamalainen is used to identify the replacement codeword and not to distinguish between control information and data.

Rejection of Claim 11 based upon Hamalainen and Fukui (6,266,349):

Claim 11 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Hamalainen in view of Fukui.

Fukui transmits frames over a single serial line. He also transmits frame synchronization signals obtained from a FIFO over another line indicating the boundaries between frames. Thus, what is retrieved is the status of a packet and not information as to the FIFO itself (i.e., FIFO status flow information). In the present application the FIFO status flow information is the amount of data a FIFO can accept without overflowing and an urgent request for more data to prevent underflowing. Thus, Fukui does not disclose transmitting FIFO status flow information.

Accordingly, re-consideration of the present application is respectfully solicited.

Respectfully submitted,

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Geoffrey R. Myers 6-13-2006
Geoffrey R. Myers Date